

Table. 1: ISS L4s Change Table: This table identifies modifications to existing ISS L4 requirements as identified in the 03/14/97 baseline version of the RTM database.

L4 id	req_key	rel	req_type	req_status	ver_method	ver_status	CCR	clarification	text
C-ISS-01280	10892	A <u>B0</u>	functional	approved	demo	unverified	96-1016		The ISS shall provide LAN connectivity and OSI Layer 1 through 4 (i.e., from the physical to the transport layer) services between the SMC and the EOC via a GFE LAN.
C-ISS-01290	949	A <u>B0</u>	functional	approved	<u>demo</u>	<u>unverified</u>			The ISS shall provide LAN connectivity and OSI Layer 1 through 4 (i.e., from the physical to the transport layer) services between the FOS EOC components and the CSMS-provided LSM within the EOC.
C-ISS-01365	10642	B0	functional interface	approved	test	unverified	96-1355		The ISS shall provide for connectivity to support interactive remote access by SCFs at the following DAACs: a. GSFC b. NSIDC e. JPL
C-ISS-01370	10643	B0	functional interface	approved	inspection	unverified	96-1355		The ISS shall provide at the following DAACs an 8-port Terminal Access Server for SCFs requiring interactive remote access via a dial-up connection: a. GSFC b. NSIDC e. JPL
C-ISS-01380	10644	B0	functional interface	approved	inspection	partially verified <u>unverified</u>	96-1355		The ISS shall provide at the following DAACs two V.34 compatible modems for each SCF requiring remote access via a dial-up connection: a. GSFC b. NSIDC e. JPL
C-ISS-02300	7414	B0 <u>B</u>	performance	approved	test	unverified	96-1355		The ISS-INHW CI EOC LAN loop delay contribution shall not exceed more than 500 msec (goal 250 msec) seconds of the total ECS delay of 2.5 seconds for emergency real-time commands.
C-ISS-02310	7415	B0 <u>B</u>	performance	approved	test	unverified	96-1355		The ISS-INHW CI EOC Operational LAN backbone shall be able to support a peak traffic rate of 24 Mbps.
C-ISS-02400	7424	B0 <u>B</u>	performance	approved	test	unverified	96-1355		The ISS-INHW CI EOC Operational LAN shall be able to support 230 network devices without redesign.
C-ISS-02410	7425	B0 <u>B</u>	performance	approved	test	unverified	96-1355		The ISS-INHW CI EOC Operational LAN shall be able to support peak data rates of up to 48 Mbps without redesign.
C-ISS-04090	5233	A	RMA	approved	<u>test</u>	<u>unverified</u>			The portion of the DAAC LAN supporting the SDPS function of information searches on the ECS Directory shall contribute

L4 id	req_key	rel	req_type	req_status	ver_method	ver_status	CCR	clarification	text
		<u>B1</u>							to the function's operational availability of 0.993 at a minimum and a mean down time of two (2) hours or less during times of staffed operation.
C-ISS-04110	5235	A	RMA	approved	<u>test</u>	<u>unverified</u>			The portion of the DAAC LAN supporting the SDPS function of metadata ingest and update shall contribute to the function's operational availability of 0.96 at a minimum and a mean down time of four (4) hours or less during times of staffed operation.
C-ISS-04120	5236	A <u>B1</u>	RMA	approved	<u>test</u>	<u>unverified</u>			The portion of the DAAC LAN supporting the SDPS function of information searches on local holdings shall contribute to the function's operational availability of 0.96 at a minimum and a mean down time of four (4) hours or less during times of staffed operation.
C-ISS-04130	12700	A <u>B1</u>	RMA	approved	<u>test</u>	<u>unverified</u>			The portion of the DAAC LAN supporting the SDPS function of local data order submission shall contribute to the function's operational availability of 0.96 at a minimum and a mean down time of four (4) hours or less during times of staffed operations.
C-ISS-04140	5238	A <u>B1</u>	RMA	approved	<u>test</u>	<u>unverified</u>			The portion of the DAAC LAN supporting the SDPS function of local data order submission across DAACs shall contribute to the function's operational availability of 0.96 at a minimum and a mean down time of four (4) hours or less during times of staffed operation.
C-ISS-11020	12281	B0	interface	approved	test	unverified	96-1471A	ORNL interface via ESnet.	The ISS shall interface with NSI at GSFC, LaRC, EDC, JPL , and NSIDC, ORNL , and ASF to provide DAAC access to science users in accordance with current document "Interface Requirements Document between EOSDIS Core System (ECS) and the NASA Science Internet (NSI), 505-41-17".
C-ISS-11090	12282	B0	functional	approved	test	unverified	97-0130A		The ISS shall provide connectivity to V0 network nodes at the GSFC, ORNL , EDC , LaRC, JPL , ASF , and NSIDC DAAC sites in order to provide interoperability between ECS and V0.
C-ISS-11170	7432	B0 <u>B</u>	functional	approved	test	unverified	96-1355		The ISS shall provide for connectivity between the EOC and EBnet.
C-ISS-11180	7433	B0 <u>B</u>	functional	approved	test	unverified	96-1355		The ISS shall provide for connectivity between the EOC and NSI for EOC/IST communications.
C-ISS-11195	11875	B0	functional	approved	test	unverified	96-1471A		The ISS shall provide for connectivity with EBnet at the following ECS sites: a. GSFC DAAC b. GSFC EOC c. GSFC SMC

L4 id	req_key	rel	req_type	req_status	ver_method	ver_status	CCR	clarification	text
									d. LaRC DAAC f. JPL DAAC g. ASF DAAC h. NSIDC DAAC i. EDC DAAC
C-ISS-20000	11876	B0	functional	approved	test	unverified	96-1471A		The ISS shall provide LANs at the following Release B sites: a. GSFC DAAC; b. GSFC EOC; c. EDC DAAC; d. LaRC DAAC; f. GSFC SMC; g. JPL DAAC ; h. ASF DAAC ; i. ORNL DAAC ; j. NSIDC DAAC
C-ISS-20050	7441	B0 <u>B1</u>	performance	approved	test	unverified	96-1355		The ISS shall provide sufficient local area network bandwidth at the JPL DAAC to support data transfer between and among physical nodes provided in accordance with the Release B network I/O sizing listed in Appendix A of the current version of 304-CD-005.
C-ISS-20070	7443	B0 <u>B1</u>	performance	approved	test	unverified	96-1355		The ISS shall provide sufficient local area network bandwidth at the ORNL DAAC to support data transfer between and among physical nodes in accordance with the Release B network I/O sizing listed in Appendix A of the current version of 304-CD-005.
C-ISS-20090	7445	B0	performance	approved	test	unverified	96-1355		The ISS LANs at the Release B sites <u>GSFC, GSFC EOC, GSFC SMC, EDC, LaRC, and NSIDC DAACs</u> shall be capable of supporting twice the R-B network traffic load estimates without redesign.
C-ISS-20120	7448	B0 <u>B</u>	functional	approved	test	unverified	96-1355		The ISS shall provide for connectivity between the EOC and EBnet for AM-1 instrument flight operations.
C-ISS-20130	7449	B0 <u>B1</u>	functional	approved	test	unverified	96-1355		The ISS shall provide LAN connectivity and OSI Layer 1 through 4 (i.e., from the physical to the transport layer) services at the JPL DAAC.
C-ISS-20150	7451	B0 <u>B1</u>	functional	approved	test	unverified	96-1355		The ISS shall provide LAN connectivity and OSI Layer 1 through 4 (i.e., from the physical to the transport layer) services at the ORNL DAAC.
C-ISS-20170	7453	B0 <u>B</u>	functional	approved	test	unverified	96-1355		The ISS shall provide LAN connectivity and OSI Layer 1 through 4 (i.e., from the physical to the transport layer) services at the GSFC EOC.

Table. 2: This table Generates New ISS L4 requirements.

L4 id	req_key	rel	req_type	req_status	ver_method	ver_status	CCR	clarification	text
<u>C-ISS-11365</u>	<u>New</u>	<u>B1</u>	<u>functional interface</u>	<u>approved</u>	<u>test</u>	<u>unverified</u>			<u>The ISS shall provide for connectivity to support interactive remote access by SCFs at the JPL DAAC.</u>
<u>C-ISS-11370</u>	<u>New</u>	<u>B1</u>	<u>functional interface</u>	<u>approved</u>	<u>inspection</u>	<u>unverified</u>			<u>The ISS shall provide an 8-port Terminal Access Server for SCFs requiring interactive remote access via a dial-up connection at the JPL DAAC.</u>
<u>C-ISS-11380</u>	<u>New</u>	<u>B1</u>	<u>functional interface</u>	<u>approved</u>	<u>inspection</u>	<u>unverified</u>			<u>The ISS shall provide two V.34 compatible modems for each SCF requiring remote access via a dial-up connection at the JPL DAAC.</u>
<u>C-ISS-20010</u>	<u>New</u>	<u>B1</u>	<u>functional</u>	<u>approved</u>	<u>test</u>	<u>unverified</u>			<u>The ISS shall provide LANs at the JPL and ORNL DAACs.</u>
<u>C-ISS-20095</u>	<u>New</u>	<u>B1</u>	<u>performance</u>	<u>approved</u>	<u>test</u>	<u>unverified</u>			<u>The ISS LANs at JPL and ORNL DAACs shall be capable of supporting twice the R-B network traffic load estimates without redesign.</u>
<u>C-ISS-21020</u>	<u>New</u>	<u>B1</u>	<u>interface</u>	<u>approved</u>	<u>test</u>	<u>unverified</u>		<u>ORNL interface via ESnet.</u>	<u>The ISS shall interface with NSI at JPL and ORNL to provide DAAC access to science users in accordance with current document "Interface Requirements Document between EOSDIS Core System (ECS) and the NASA Science Internet (NSI), 505-41-17".</u>
<u>C-ISS-21090</u>	<u>New</u>	<u>B1</u>	<u>functional</u>	<u>approved</u>	<u>test</u>	<u>unverified</u>			<u>The ISS shall provide connectivity to V0 network nodes at the ORNL and JPL sites in order to provide interoperability between ECS and V0.</u>
<u>C-ISS-21195</u>	<u>New</u>	<u>B0</u>	<u>functional</u>	<u>approved</u>	<u>test</u>	<u>unverified</u>			<u>The ISS shall provide for connectivity with EBnet at the JPL DAAC.</u>

Table. 3: This table identifies release changes to existing ISS L4 requirements as identified in the 03/14/97 baseline version of the RTM database.

L4 id	req_key	rel	req_type	req_status	ver_method	ver_status	CCR	clarification	text
C-ISS-20060	7442	<u>B0</u>	performance	approved	test	unverified	96-1355		The ISS shall provide sufficient local area network bandwidth at the ASF DAAC to support data transfer between and among physical nodes in accordance with the Release B network I/O sizing listed in Appendix A of the current version of 304-CD-005.
C-ISS-20110	9779	<u>B0</u>	functional	approved	test	unverified	96-1355		The ISS shall provide for connectivity to the ASF campus network to enable transfer of data between the ASF DAAC and the ASF production systems associated with ERS-1/2, JERS-1, and RADARSAT.

C-ISS-20140	7450	B <u>C</u>	functional	approved	test	unverified	96-1355		The ISS shall provide LAN connectivity and OSI Layer 1 through 4 (i.e., from the physical to the transport layer) services at the ASF DAAC.
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Table 4: Generating new links from RbRs to ISS I4 requirements

RbR-id	L4-id
PGS-0915#B	<u>C-ISS-11365</u>
SCF-0085#B	<u>C-ISS-11365</u>
PGS-0915#B	<u>C-ISS-11370</u>
PGS-0915#B	<u>C-ISS-11380</u>
ESN-0610#B	<u>C-ISS-20010</u>
ESN-0070#B	<u>C-ISS-20010</u>
ESN-0010#B	<u>C-ISS-20010</u>
ESN-0650#B	<u>C-ISS-20010</u>
ESN-1207#B	<u>C-ISS-20095</u>
ESN-0240#B	<u>C-ISS-20095</u>
ESN-0006#B	<u>C-ISS-21020</u>
ESN-1180#B	<u>C-ISS-21020</u>
V0-0055#B	<u>C-ISS-21090</u>
ESN-0010#B	<u>C-ISS-21090</u>
EOSD1695#B	<u>C-ISS-21090</u>
ESN-0070#B	<u>C-ISS-21195</u>
ESN-0080#B	<u>C-ISS-21195</u>
EOSD0020#B	<u>C-ISS-21195</u>

Table 5: Deleting links from RbRs to Release. C ISS I4 requirements.

RbR-id	L4-id
ESN-0010#B	<u>C-ISS-20060</u>
ESN-0010#B	<u>C-ISS-20110</u>
ESN-0010#B	<u>C-ISS-20140</u>
ESN-0070#B	<u>C-ISS-20060</u>
ESN-0070#B	<u>C-ISS-20110</u>
ESN-0070#B	<u>C-ISS-20140</u>
ESN-1206#B	<u>C-ISS-20060</u>